The

Loan Arranger

Spring 2004

Revolving Loan and Operator Certification Section Environmental Science and Services Division

Michigan Department of Environmental Quality **DEQ**

SWQIF Helps Stop 'Squish' in Ann Arbor **Basements** By Edwyna McKee

Scattered throughout the city of Ann Arbor are neighborhoods which have suffered through sanitary sewer basement backups during and following substantial rainstorms.

The city of Ann Arbor, through a comprehensive, multiyear process, defined the scope of sanitary sewer overflow and sewage backup incidents. An evaluation of Ann Arbor's collection system showed that many homes, particularly those built prior to the mid-1980s, have footing drains that are connected to the sanitary sewer system. While this arrangement does serve to move rainwater and snowmelt water away from the home's foundation, it also sends significant amounts of clearwater into Ann Arbor's sanitary sewer system. Clearwater flowing into the sanitary system may cause surcharging, resulting in overflows to surface waters and/or backups into residential basements.

Studies of the system's performance confirmed that the majority of clearwater entering Ann Arbor's sanitary system came from footing drains. Ann Arbor then identified possible solutions to minimize or eliminate the impact of future sewage backup events. A comprehensive evaluation of various alternatives was performed. The alternatives examined included building relief sewers, equalization basins, increasing capacity of existing sewer pipes, and footing drain disconnection. A task force determined that footing drain disconnection was the cost-effective method to reduce and eliminate basement backups. Implementation of this alternative would also permanently reduce clearwater entering the system and being transported/treated at the wastewater treatment plant. Ann Arbor's project design included installation of sump pumps in homes that were contributing most significantly to the surcharging problem. After the installation, the sump pumps direct all storm water and groundwater into Ann Arbor's separate storm water collection system. This redirection of clearwater reduces the peak flows during a storm event, and therefore reduces the likelihood of sanitary sewers surcharging

into basements. The footing drain disconnection alternative also provides basement backup protection for each home in which a sump pump is installed. A backflow prevention device is installed in the basement on each sanitary sewer connectionfloor drains, laundry facilities, showers, and toilets.

The completed disconnection and sump pump installation not only protects the home from backups, but also prevents backups in other homes by removing excess clearwater from the sanitary sewer system. The clearwater from the sump pumps discharges into a shallow drainage system located in the area between the sidewalk and the curb, in the city right of way. Directional drilling equipment is used to complete the new footing drain-storm sewer.

(Photos courtesy of Camp, Dresser and McKee, Inc.)





This method eliminates most disruptions to residents' front lawns; removal of existing landscaping and residential access restrictions are usually not problems when this method is used. On average, the construction activity within individual basements has been completed within two workdays, which has not been objectionable to most residents. The average cost per home for the sump pump and backflow preventer installations made to date has been \$3,900. Ann Arbor has planned a minimum of 775 footing drain disconnections over the next four years.

The Twenty-First Question By Jeff Herrold

In the last issue of the *Loan Arranger*, we announced the publication of our "Twenty Questions & Answers" detailing the specifics of Michigan's new SWQIF Program. You can view this document at our Clean Water Revolving Funds website at http://www.michigan.gov/deq/0,1607,7-135-3307 3515 4143---,00.html. Now we can add an answer to the often-asked twenty-first question.

Question #21: Have any SWQIF loans been awarded?

Answer: Yes, the first two loans under the SWQIF Program were awarded in the second quarter of the 2004 fiscal year, with loan closings on March 25, 2004.

The city of Ann Arbor received \$875,000 in loan assistance and the Charter Township of Clinton received \$270,000. Both communities sought the assistance to remove household footing drains from their sanitary sewer systems, thereby relieving hydraulic overloading of sewers that had resulted in basement backups and the discharge of raw sewage to the state's waterways.

Seeking Environmental Reviews during Project Planning By Jeff Herrold

During the development of a revolving loan fund project plan, communities or their consultants send out requests for project review and comments to a number of federal and state environmental agencies. Recent changes within the Department of Environmental Quality (DEQ) have resulted in an alteration in who performs some of these environmental reviews. Also, many consultants erroneously use a "scattershot" approach during project planning, sending "request for comments" letters to ALL review agencies REGARDLESS of whether or not an impact is likely. As a result, requests are often not reaching the right target or, due to staff shortages, cannot be addressed in the timeliest manner. One of the key changes within the DEQ is the consolidation of most of the environmental reviews conducted by the Geological & Land Management Division (GLMD) into a single office - the Permit Consolidation Unit (PCU). The PCU will act as the DEQ clearinghouse for reviews involving a number of sensitive environmental features: zones, floodplains, Great Lakes bottomlands, sand dunes, stream crossings, and wetlands.

However, communities and consultants should contact the PCU <u>only if</u> a sensitive feature is <u>likely</u> to be impacted by the proposed project.

For further information on GLMD issues and PCU reviews, please see the accompanying article.

When requesting review and comments from a federal or state agency, communities and consultants need to provide (at a minimum) the following information in the contact letter:

- 1. A legible map showing the area(s) affected by the proposed construction.
- 2. The location of each construction site using the Congressional Land Survey System, Township, Range, and Section.
- A description of the proposed construction that contains sufficient detail to allow the reviewing agency to assess possible impacts of the proposed action.
- 4. A reasonable date when comments should be returned to the applicant.

All correspondence related to agency contacts (i.e., the initial and any subsequent contact letters as well as all agency responses) must be included in the final project plan. To ensure that consultant requests are properly targeted, we have added two updated documents to our Forms and Guidance web page: Applicant Actions Related to DWRF Project Planning and Applicant Actions Related to SRF & SWQIF Project Planning. Please go to http://www.michigan.gov/deq/0,1607,7-135-3307-3515-4143----,00.html to download these documents.

Please note there are only three agencies that <u>must</u> be contacted in <u>every</u> case:

Environmental Review Coordinator State Historic Preservation Office P.O. Box 30740 Lansing, MI 48909-8240

U.S. Fish & Wildlife Service East Lansing Field Office 2651 Coolidge Road Lansing, MI 48823

Michigan Natural Features Inventory Environmental Review P.O. Box 30444 Lansing, MI 48909-7944

We encourage communities to begin revolving loan fund project plan development as early as possible, ideally ten or more months prior to the state's plan submittal deadline.

If you have any questions concerning environmental review contacts, please feel free to contact Jeff Herrold by e-mail at herroldj@michigan.gov or by phone at 517-335-1977.

How GLMD Regulations Affect Loan Projects By Jeff Herrold

Many of the state environmental agency reviews needed during the development of a revolving loan fund project plan fall inside the GLMD. The GLMD is responsible for regulating and conducting land/water interface reviews under Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended:

Part	Title	Informational Web Site
31	Floodplains Protection	http://www.michigan.gov/deq/0,1607, 7-135-3313_3684_3725,00.html
301	Inland Lakes & Streams	http://www.michigan.gov/deq/0,1607, 7-135-3313_3681_28734,00.html
303	Wetlands Protection	http://www.michigan.gov/deq/0,1607, 7-135-3313_3687,00.html
315	Dam Safety	http://www.michigan.gov/deq/0,1607, 7-135-3313_3684_3723,00.html
323	Shorelands Protection & Management	http://www.michigan.gov/deq/0,1607, 7-135-3313_3677_3700,00.html
325	Great Lakes Submerged Lands	http://www.michigan.gov/deq/0,1607, 7-135-3313_3677_3702,00.html
353	Sand Dune Protection & Management	http://www.michigan.gov/deq/0,1607, 7-135-3311_4114_4236,00.html

For revolving loan fund projects, Part 315 will apply only when the work proposed for funding involves a lagoon or pond where the berm encloses five or more acres. In these cases, a community may need to apply for a permit from the GLMD's Dam Safety Unit. In all other cases, the GLMD's PCU will act as the clearinghouse for project reviews and permit applications. WHEN APPROPRIATE, as explained below, requests for project reviews and applications for permits should be sent to:

Permit Consolidation Unit DEQ Geological and Land Management Division P.O. Box 30204 Lansing, MI 48909-7704

When Project Reviews Are Needed

Communities and their consultants should request a project review from the PCU only if a sensitive environmental feature is <u>likely</u> to be impacted by the proposed project. Sensitive features include floodplains, Great Lakes protected lands, stream crossings, and wetlands. A number of aids are available for determining whether a sensitive environmental feature lies within the vicinity of the proposed project:

 The 100-year floodplains are often demarcated on a National Flood Insurance Map, available at http://www.fema.gov/maps.shtm.

- The Atlas of Critical Dune Areas in Michigan (protected Great Lakes shorelands) can be found at http://www.michigan.gov/deq/0,1607,7-135-3311 4114 4236-70207--,00.html.
- National Wetlands Inventory maps are available at http://www.nwi.fws.gov.
- Information on qualified consultants who can prepare wetlands assessments can be found at http://www.michigan.gov/deq/0,1607,7-135-3313 3687-10318--,00.html.

When requesting a project review from the PCU, communities and their consultants need to provide the following information in the contact letter:

- Legible maps showing the area(s) affected by the proposed construction. Marked topographic maps are needed for floodplain reviews. All maps must be legible and labels must not obscure any part of the project area. Originals are highly preferred (no faxed copies please).
- 2. The location of each construction site by citing the Township, Range, and Section.
- 3. A description of the proposed construction that contains sufficient detail to allow the reviewing agency to assess possible impacts of the proposed action. The description should include the construction methods to be used, the streets/roads involved, and an identification of streams, lakes, wetlands, or regulated floodplains where project activities will take place (including directional boring).
- 4. A reasonable date when comments should be returned to the applicant. (Please note that the PCU normally has a 2 to 4 week backlog of projects to review and everything is reviewed in the chronological order in which it was received.)

When Construction Permits Are Needed

There are two state-specific permits which cover GLMD-regulated activities:

- Any construction, fill, or alteration in a floodplain of a river, stream, or drain, which has a drainage area greater than or equal to 2 square miles will require a state floodplain permit under Part 31.
- Any construction, repair, or alteration in an impoundment, such as a lagoon or holding pond, where the berm encloses 5 or more acres and is at least 6 feet higher in elevation than the impoundment's lowest point, will require a state dam safety permit under Part 315.

Beyond these state-specific permitting requirements, the U.S. Army Corps of Engineers regulates land/water interface activities in or affecting navigable waters of the United States, including the discharge of dredged or fill materials into waterways and adjacent wetlands. In order to prevent duplication, a Joint Permit Application (JPA) is available to ensure efficient permit processing in

areas where the GLMD and the U.S. Army Corps of Engineers share jurisdiction. The JPA covers activities affecting critical dunes, floodplains, Great Lakes bottom lands, inland lakes and streams, and wetlands. If a revolving loan fund project requires a permit for activities affecting any of these environmental features, only one application is required to meet state <u>and</u> federal requirements. More information on the JPA and copies of the permit application are available at http://www.michigan.gov/deg/0.1607,7-135-

3307 29692 24403---,00.html. This web site also provides the tools needed to prepare the application, a fee schedule, an application instruction manual, staff contacts, and resource location maps (including flood-plain and wetlands mapping). Please note that the PCU has had problems with some consultants who think permits are *not* needed for activities such as: (1) stream, pond, lake, or wetland crossings by means of a directional boring; (2) construction in floodplains not identified on a National Flood Insurance Map; (3) construction in wetlands not identified on a National Wetlands Inventory Map; and (4) cases where the amount of fill is equal to the amount of material excavated during construction. In ALL of these cases, a permit WILL be needed.

Summary

If GLMD-regulated resources may or will be impacted by your proposed project, it is critical that all information identified as necessary be furnished to the PCU in order to expedite reviews and permit processing. Our State Environmental Review Process cannot be completed until confirmation is received as to the need for permits and the mitigation that will be required. It is highly recommended that you contract with qualified consultants for wetland and floodplain delineations in order to facilitate the review process, as this may eliminate the need for an on-site inspection by GLMD staff. If your project will not impact GLMD-regulated resources, there is no need to contact the PCU. However, the rationale for your determination of "no impact" must be presented in the final project plan.

DEQ Announces Revolving Fund Loan Commitments

The DEQ recently announced eight new loan commitments from the State Revolving Fund (SRF) and five new commitments from the Drinking Water Revolving Fund (DWRF). In addition, two loan commitments were made from the SWQIF; the first assistance tendered using funds from the November 2002 passage of Michigan's Great Lakes Water Quality Bond Initiative. These 15 loans total over \$56 million.

The funded SRF projects include:

Two loans to the city of Lansing totaling \$14,275,000.
 These represent the most recent in a series of loans to finance the separation of sewers in the city and eliminate the discharge of untreated combined sewage to the Grand River. To date Lansing has received nearly \$127 million in SRF financing for its

- Long Term Combined Sewer Overflow Control Program.
- \$3,770,000 for the continuation of combined sewer separation in the city of Port Huron. The city has received eight prior loans for this ongoing project, bringing Port Huron's total SRF assistance to date to nearly \$52 million.
- \$1,220,000 to the city of Warren to finance the third segment in a series of projects to upgrade facilities at the Warren Wastewater Treatment Plant to insure adequate treatment of wastewater flows.
- \$2,165,000 to the city of St. Joseph to complete the separation if it has combined sewers. Using this assistance, and earlier financing received in a 2002 SRF loan, the city will eliminate the overflow of combined sewage to the St. Joseph River.
- \$1,405,000 to Clinton Charter Township in Macomb County for the rehabilitation of sanitary sewers as part of a program to eliminate sanitary sewer overflows.
- \$9,605,000 to the city of East Lansing for a Combined Sewage Retention and Treatment Basin. This assistance will allow the city to complete its Long Term Combined Sewer Overflow Control Program and eliminate the overflow of untreated combined sewage to the Red Cedar River.
- \$3,470,000 to the city of Marquette for the upgrade of wastewater pumping stations and the replacement of a deteriorating forcemain.

The funded DWRF projects include:

- \$835,000 in loan assistance to Huron County and the village of Elkton to replace deteriorating water mains and accomplish looping of dead ends in the village's water distribution system..
- A \$1,520,000 loan to the city of Brighton to rehabilitate portions of its drinking water treatment facility and replace portions of its distribution system.
- A \$13,900,000 loan to the city of Muskegon. This loan will finance the upgrade and expansion of the city's drinking water treatment facility, along with improvements to its storage, pumping, and distribution systems.
- \$805,000 in loan assistance to the city of Ann Arbor for the replacement of water mains and the provision of city water service to two subdivisions.
- \$2,315,000 in loan assistance to the city of Port Huron for the replacement of water mains in areas of the city undergoing combined sewer separation.

Since the inception of Michigan's DWRF program in 1998, nearly \$300 million in assistance has been tendered.

The DEQ is also announcing the first loan commitments from the SWQIF. Created by the passage of Proposal 2 in November of 2002, funding from this program can be used to accomplish the removal of storm water or groundwater from sanitary sewer leads. The city of Ann Arbor will receive \$875,000 in loan assistance and the Charter Township of Clinton will receive \$270,000. Both

communities will use the assistance to remove household footing drains from their sanitary sewer systems, thereby relieving hydraulic overloading of the sewers that has resulted in basement back ups and the discharge of raw sewage to the state's waterways.

DEQ Director Steven Chester noted that these programs continue to represent the primary source of financial assistance available to local governments and underscored the fact that revolving loan fund programs continue to be the most effective means of providing assistance for critical water and wastewater infrastructure needs. "As the wastewater and drinking water infrastructures in Michigan continue to age, the demand for assistance like that provided by the revolving fund programs will continue to grow," said Director Chester. "Federal and state revolving fund mechanisms deliver more infrastructure construction per investment dollar. In addition, they ease the financial burden of necessary system improvements through below market interest rates, while ensuring that continued funding capabilities exist for future years. I am particularly pleased that fiscal resources made available by Michigan voters in November of 2002 under Proposal 2 are now being used to assist local units of government and reduce the costs incurred by system users for critical infrastructure improvements."

Making Tracks

This issue has three new staff members being welcomed into the Revolving Loan and Operator Certification Section, in the Program Management Unit - East: Bree Westdorp, Kelly Wilkes, and Les Prether.

Bree Westdorp joined the Revolving Loan and Operator Certification Section as a project manager. She is a recent graduate of Dickinson College, Carlisle, Pennsylvania; with a Bachelors of Science in Environmental Science. Since graduating in May 2003, and before joining us, Bree worked on two projects. The first was with the University of Chicago's Ecology and Evolution Department, where she researched the virus Nucleopolyhedorisis and its co-evolutionary behavior with the gypsy moth. The second was a position with Pfizer. There she created an environmental database detailing the environmental and toxicological effects of each chemical compound used or manufactured by Pfizer. Bree now looks forward to working with our section and helping municipalities achieve safe and efficient drinking water and wastewater systems.

Kelly Wilkes joined the DEQ on December 12, 2004, transferring from Consumer Industry Services. She has also worked on the Michigan Employment Security Board of Review, starting in April of 2003. Beforehand she was an Office Manager for Hostetler, Raleeh and Associates for nearly five years. Kelly has worked hard and earned her Associate of Science/Fashion Merchandising and Business Management Degree in 1993 at

Davenport University, as well as accomplishing a Bachelor of Business Studies in 2003, also at Davenport University. She is currently working on a Bachelor of Business Administration with a Diploma in Medical Billing at Davenport University, in addition to her secretarial duties with us.

Les Prether hired into the DEQ to serve as a project manager. He comes to our section with a Bachelors of Science in Water Resources Management from Central State University in Wilberforce, Ohio. He has worked with the United States Department of Interior (Office of Surface Mining Reclamation and Enforcement) Appalachian Regional Coordinating Center, in Pittsburgh, Pennsylvania, with four years as a Physical Scientist, technical liaison for the Program Amendment Division. His duties entailed technical investigations of mining related damages, including hydro-geologic (water loss, water diminution), subsidence, GPS, writing of related reports, State Program Amendments, and resolving technical issues with the amendment writing process. Les is now very happy to be an integral part of the DEQ team as a manager of revolving loan projects.

NEWS FLASH!

The SRF, widely known for providing financial assistance to communities with wastewater system problems, is preparing for its first nonpoint source project plan submittal. Our staff has interviewed a southeastern Michigan community that is preparing a project plan for construction of a runoff detention pond on a county park site. This proposed 3-tiered pond is designed to capture and treat runoff from the surrounding creek-shed, removing approximately 50 percent of the incoming phosphorus. The anticipated project plan will be the first of what is hoped to be a growing flow of nonpoint source project applications for SRF assistance. Applicants for nonpoint source loans are required to meet essentially the same requirements as traditional wastewater system project SRF loans. Part 53 of Public Act 451, 1994 as amended, contains the outline of the program; however, the details of the program are being developed as this bulletin goes to press. The Director of the DEQ will allocate at least 2 percent of the annual available SRF dollars to applicants whose projects meet the criteria. The SRF staff are ready and waiting by the phone to take your calls, so if your community is considering a nonpoint source project, contact our office at 517-373-6121. We will help your nonpoint source project to make headlines and protect the waters in your community.



If you know someone, who would like to be added to *The Loan Arranger* mailing list, or have an address change, please e-mail the editor, Ms. Deana M. Bishop, at bishopd@michigan.gov

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